Guangshen Railway Company Limited Social Responsibility Report 2021



March 30, 2022

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I. Chairman's Speech

Dear friends,

In 2021, continuous COVID-19 resurgences had a serve impact on the economy and society. During the hard times, Guangshen Railway Company Limited (GSRC) maintained the pursuit of progress while ensuring stability, balanced transport operations and COVID-19 control, and improved the foundation, standards, quality, and efficiency. In addition, we stepped up efforts to achieve energy saving, consumption reduction, and innovations, guaranteed steady railway passenger and freight transport, and realized the annual safe production targets. Moreover, we promoted the building of a community of shared future for the group and employees and practically fulfilled our due responsibilities in economic, social, and environmentally sustainable development.

2022 marks the holding of the 20th National Congress of the Communist Party of China (CPC) and takes up an important position in the 14th Five-Year Plan. Facing the raging COVID-19 pandemic and the accelerated once-in-a-century changes, GSRC will follow the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, firmly rely on the strong support from China State Railway Group Co., Ltd. (China Railway), China Railway Guangzhou Group Co., Ltd., and governments at all levels, and resolutely implement decisions and deployments by the shareholders' meeting and the Board of Directors. Furthermore, we will work harder and forge ahead to be a railway pioneer on the journey of turning China into a country with vast transport infrastructure and strive for a new development landscape for the group.

Chairman: Wu Yong March 30, 2022

II. Statement of the Board of Directors

GSRC highly acknowledges the importance of benign corporate governance, internal control, and risk management to business development, and immensely focuses on environmental, social, and corporate governance (ESG) that is essential to its sustainable development.

GSRC has already established a board-centered management structure of ESG matters. As the highest responsible and decision-making body for ESG matters, the Board of Directors (Board for short) takes full responsibility for the strategies and reporting of GSRC's ESG matters and regularly reviews major ESG issues to ensure that appropriate risk control measures have been implemented.

GSRC's Board and all its directors pledge that there are no false records, misleading statements, or material omissions in this report, and bear individual and joint and several liabilities for the authenticity, accuracy, and completeness of the report.

- III. Corporate Social Responsibility (CSR) Outlook
- (I) Company Profile

GSRC was established in Shenzhen on March 6, 1996, in accordance with the *Company Law of the People's Republic of China*. In May 1996, GSRC got listed on the Stock Exchange of Hong Kong Limited (SEHK) and the New York Stock Exchange (NYSE) by issuing H shares (stock code: 00525) and American Depositary Shares (ADS) respectively. In December 2006, the group got listed on the Shanghai Stock Exchange (SSE) by issuing A shares (stock code: 601333). In January 2007, GSRC purchased the Guangzhou-Pingshi section (southern section of Beijing-Guangzhou Railway) with the funds raised from the issuance of A-shares, helping it upgrade from a regional railway operator to a national backbone railway service provider and significantly improve its transportation capability. It applied for the surrender of ADS and withdrawal from NYSE in November 2020 and terminated the depository agreement in October 2021. Currently, GSRC is the sole railway transportation enterprise issuing securities in the Shanghai Stock Exchange (SSE), HKSE, and NYSE.

GSRC mainly provides transportation services along the Shenzhen-Guangzhou-Pingshi section and cooperates with MTR Corporation Limited in offering passenger services by trains stopping over by Hong Kong. Meanwhile, GSRC is entrusted to provide railway operation services for the railways, such as Wuhan-Guangzhou Railway, Guangzhou–Zhuhai Intercity High-Speed Railway, Guangzhou-Shenzhen-Hong Kong Express Rail Link, Guangzhou–Zhuhai Railway, Xiamen-Shenzhen Railway, Guangdong Railway, Nanning-Guangzhou Railway, Guiyang-Guangzhou High-speed Railway, the Pearl River Delta Metropolitan Region Intercity Railway System, Maoming-Zhanjiang Railway, Shenzhen-Maoming Railway, Meizhou-Shantou Railway, and Ganzhou-Shenzhen High-speed Railway.

The Shenzhen-Guangzhou-Pingshi Railway solely operated by GSRC passes through Guangdong Province from north to south, with a service mileage of 481.2 kilometers. The Guangzhou-Pingshi section is the southern section of the Beijing-Guangzhou Railway — the north-south trunk railway in China; as an important part of China's railway network, the Guangzhou-Shenzhen section is a major railway connecting the mainland and Hong Kong.

(II) CSR Outlook Management

1. Outlook on social responsibilities

GSRC is a listed company specialized in comprehensive transportation services for both travelers and goods. It closely combines management operation with the fulfillment of social responsibilities to create value for shareholders and strive to realize the overall social responsibility target of sustainable economic, social and environmental development.

When it comes to fulfilling social responsibilities, GSRC focuses on satisfying passenger and cargo transportation demands and takes action on the premise of guaranteeing transportation safety and creating management and operation benefits. To be specific, GSRC assumes six major social responsibilities, including construction and development, transportation operation, safety production, harmonious construction, public welfare, and environmental protection. These responsibilities are correlated and interlinked to jointly serve the core target of satisfying passenger and cargo transportation demands.



GSRC's Outlook on Social Responsibilities

GSRC's Board is the top regulator of ESG matters. GSRC's management is responsible for leading functional departments of human resources, operation, finance, audit, and general affairs to carry out work related to social responsibility, while the Board Secretariat is responsible for the collection and disclosure of CSR information. All stations and depots subordinate to GSRC set up full-time departments and posts of labor safety, technical management, salary and benefits, staff training, health, environmental protection, and energy saving to fulfill CSR.

IV. Standardized Operation and Integrity Management

(I) Corporate Governance

In 2021, GSRC convened one shareholders' meeting, six meetings of the Board of Directors, five meetings of the Board of Supervisors, six meetings of the Audit Committee, and 20 general manager office meetings. In addition, GSRC appointed another two members for the Board of Directors and two members for the Board of Supervisors and elected the chair of the Board of Supervisors. To implement the requirements of the special campaign on the governance of listed companies launched by the China Securities Regulatory Commission (CSRC), GSRC combed through and summarized the corporate governance from 2018 to 2020 and submitted the *List of Self-inspection on Governance of the Listed Company* to the regulatory authorities.

The detailed information on corporate governance, directors, supervisors, and senior executives is shown in the annual report 2021.

(II) Internal control

GSRC has a well-established internal control system to track and check the actual implementation of systems and evaluate if various management systems are effectively implemented. The Audit Committee is responsible for supervising the internal control construction. The Audit Department, the Internal Control Office, and external accountants form the Internal Control and Evaluation Work Group. The Board of Directors evaluates the company's internal control annually. In accordance with the requirements of relevant laws, regulations, and guidelines of internal control, GSRC has continually conducted the construction and assessment of the internal control system. Within the reporting period, the testing range of the internal control process covers 40 workflows of the headquarters and 11 branches. The Audit Department takes charge of internal audit supervision. In the reporting period, the Audit Department completed 16 audit projects and issued nine audit reports and decisions related to financial revenues and business performance.

The details of internal control can be referred to in the company's annual report 2021, internal control assessment report 2021, and internal control audit report.

(III) Party Building Work

To celebrate the 100th anniversary of the founding of the CPC, the company's Party Committee organized Party history education activities, selected and awarded advanced units and individuals, carried out Party history publicity activities and practical activities themed "doing practical work for the masses", and held a number of cultural publicity activities. GSRC integrated party building with corporate governance and employed the pre-discussion procedures for major decision matters by the Party Committee. In 2021, GSRC held 23 meetings of the Party Committee and discussed 131 decision matters, among which 62 were pre-discussion ones.

The Party Committee of GSRC established, improved, and implemented the "First Topic" system, carefully organized the study of the central group, deeply put into practice the eight-point decision of the CPC Central Committee and the requirements of strict governance over the Party, and strengthened the building of a clean Party committee and the crackdown on corruption.

Preventive measures,						
Regulations and requirements	execution and supervision	Reporting procedure				
	procedures					
Employee Manual, Code of Professional Ethics for Executives, and Anti-fraud Regulations (Trial)	Executives and employees in key positions sign a relevant annual statement					
Rules for the Implementation of the Accountability for the Construction of the Party Conduct and a Clean Party Branch	The company establishes the accountability system, forms the leading group for the construction of the Party conduct and a clean Party branch, and organizes self-inspection and reports relevant matters every year.	The company establishes the monthly reporting system; the Discipline Inspection Commission reports major matters of the construction of the Party conduct and a clean Party branch				
Rules for the Implementation of the Three-major and One-large" Decision-making System	The Party Committee, Board of Directors, General Manager's Office make the "Three-major and One-large" decisions and inspect the supervision and accountability system	One can report to the superior in any of the following cases: individuals involved in decision-making hold different opinions; decision-making misplays or major losses cannot be corrected; major problems occur in the use of large funds.				
<i>Administrative Measures for Legal Affairs</i> and model contract	Anti-commercial bribe clauses in the model contract; the company establishes legal affairs supervision and inspection system and the lifetime accountability system for the management of legal affairs.					
Implementing Rules for Fund Management, Administrative Measures for Fund Allocation, and Administrative Measures for Comprehensive Budge	The company establishes the inspection and supervision system for fund and budget management and the accountability system and strengthens internal audit and supervision.	Report the clues about the private coffer				

Anti-corruption and Anti-fraud Measures and Reporting Procedure

GSRC conducted anti-corruption training through many activities, such as study of laws and regulations, discipline education month, warning educational films, notification of typical cases, professional lectures, which were participated by 40,000 employees, including 18 directors, supervisors,

and senior executives. In 2021, GSRC reported no filed or concluded lawsuits against the company or any employee for corruption.

(IV) Integrity Operation

1. Operation management

In 2021, GSRC strengthened business management, improved systems, reinforced supervision and management over large fund allocations, high-value purchases, and major contracts, and formulated and revised management regulations on finance, funds, supplies, procurement, outsourcing, and risk claims settlement, helping the company further standardize management behaviors and improve management efficiency. In this year, GSRC finished 340 major repair projects, 220 fixed-asset investment projects, and approved and signed 3,199 economic contracts.

2. Dividends

GSRC implements the long-term steady cash dividend policy to create profits for shareholders. Since its listing in 1996, GSRC has cumulatively distributed RMB 12.31 billion of cash dividends (including taxes), representing a dividend payout ratio of 56.2%. The Board of Directors proposed not paying out the final dividends of 2021.

3. Information disclosure

GSRC strictly conformed to the domestic and international information disclosure regulations, performed the information disclosure obligations of a listed company, and continuously improved the quality of information disclosure. In the fiscal year from 2020 to 2021, GSRC was given an A-level evaluation in information disclosure by SSE, recording its fifth time to receive such an evaluation. In 2021, the company published 5 regular reports and 88 temporary announcements in domestic and overseas markets. For more information, please visit SSE's official website www.sse.com.cn, HKEXnews website www.hkexnews.hk, and the company's official website www.gsrc.com.

4. Investor relations

In April 2021, GSRC held the first online annual performance disclosure meeting via "e-interview" of SSE. Six executives including members from the Board of Directors and the Board of Supervisors attended the meeting and disclosed the business performance in 2020. In addition, they actively interacted and communicated with investors and answered 26 questions. The company held the 2020 shareholders' meeting through offline and online voting, guaranteeing minority shareholders' rights to participate and vote. It maintained communication with investors through diverse channels. In 2021, GSRC received more than 100 phone calls from investors and answered 21 questions in the "E-interaction Zone" of SSE.

5. Legal affairs

On January 1, 2021, GSRC officially employed the "enterprise management and legal affairs information system". The system was built for integrated management of the internet, contracts, and cases, enhancing the efficiency in contract and case management, providing practical services for the

grassroots, and improving the corporate governance and services. In accordance with the *Implementation Rules for Procurement of External Legal Services*, GSRC standardized the procedures for external legal services, effectively improving the procurement efficiency and service quality, strengthening internal control, and preventing corruption risks. GSRC actively prevented legal risks and safeguarded the rights and interests of both the company and employees. In 2021, it concluded 37 cases, avoiding/retrieving economic loss of nearly RMB 6 million. In addition, it dealt with nine cases for actively safeguarding the rights and interests, retrieving economic loss of about RMB 2.26 million.

6. Cooperation and development

Amid the COVID-19 pandemic, GSRC has steadily stuck to the coordinated development of economy, society, and environment, striven to maintain cooperation and communication with interested parties, and practically fulfilled its corporate social responsibilities.

Company and government: The company cooperated with the government to carefully implement laws and regulations, policies, and notification requirements, take measures to coordinate pandemic control and transport, improve landscapes and environment along the railways, and establish and perfect the joint prevention and control mechanism with the local government. GSRC implemented the tax relief policy and paid taxes of RMB 421 million in accordance with the law in 2021.

Company and shareholders: GSRC has cumulatively paid shareholders RMB 12.31 billion of cash dividends (including taxes). The company strictly performed the information disclosure duty, managed investors relations, held annual shareholders' meetings and business performance disclosure meetings at the fixed period, exerted the supervision role of the Audit Committee and independent directors, implemented the online voting system for the shareholders meeting, and guaranteed shareholders' rights and interests.

Company and creditor: Within the reporting period, the company has no long-term bank loans and maintains a good partnership with the bank in other corporate businesses.

Company and suppliers: Supply chain management is an important part to ensure the normal business of transportation, production, and management. GSRC sees suppliers as important partners and carries out extensive cooperation with them to create a mutually beneficial and win-win supply chain business environment. Guided by the laws, regulations, and institutional norms such as the *Law of the People's Republic of China on Bid Invitation and Bidding*, the *Regulations for the Implementation of Law of the People's Republic of China on Bid Invitation and Bidding*, and the *Measures for the Administration of Material Procurement of China State Railway Group Co., Ltd.*, GSRC revised and improved its *Purchasing Management Measures* to carry out fair and open cooperation with suppliers, and strictly standardized bidding invitation and bidding. In addition, GSRC further strengthened the management of the supply chain and alternative database, guarding against the potential risks brought by suppliers in terms of environment, emissions, health and safety, labor rights, and anti-corruption in the supply chain. In 2021, the company organized 10 tendering and negotiation projects and 73 non-tendering procurement projects and approved 621 large-amount procurement projects of its subsidiaries and branches. In the same year, there were 23 suppliers that won the company's bidding, including 17 suppliers in Guangdong Province and 5 suppliers outside Guangdong.

Company and community: In 2021, the company continued the separation and transfer of "three 'supply' and one property (water, power and heat supply, and property management)" in the dependants' areas of state-owned enterprises. GSRC and its subsidiaries actively engaged in community construction and worked with the community on the social management of retired railway workers. GSRC strengthened joint prevention and control along the railways, reinforced railway protection facilities, and organized activities to publicize railway safety in communities and schools.

V. Pandemic Combat and Transport Security

(I) Pandemic Combat

In 2021, GSRC had unshakably implemented the decisions and deployments of the CPC Central Committee and the State Council—it strictly fulfilled the pandemic prevention policies and measures in a regular manner, realizing the "zero infection" among staff members. GSRC's efforts contributed to the restraint on the pandemic spread and the guarantee of economic and social operation.

1. Prevention measures for trains and stations

Last year, GSRC maintained regular and targeted prevention and control measures while ensuring local pandemic emergency response. This effectively enhanced pandemic containment on trains and in stations.

(1) Check the air conditioning and ventilation equipment of passenger stations and trains; clean the air conditioners and replace the filter elements; turn on the fresh air function, toilet blowers, and ventilation equipment; ensure the normal operation of the equipment.

(2) Disinfect stations and trains in a regular and standard manner, including entrances and exits, waiting areas, ticket halls, catering areas, toilets, and escalators; carry out more than 30,000 times of environmental disinfection and 258,000 times of train disinfection throughout the year.

(3) Set up prompt signs, electronic display screens, and voice broadcasts at the entrances and exits of the stations to remind passengers to cooperate with the inspection over their health codes; install the "intelligent health and epidemic prevention inspection system" to provide code verification services for passengers unable to show their health codes; assign 379 fixed-point temperature measuring devices and more than 3,000 handheld thermometers to strictly implement the requirements of checking each passenger's body temperature, health code, and mask mandates.

(4) Decisively stop and reduce trains heading for outbreak areas, strengthen the control of trains to Beijing, and implement the requirement that a 48-hour nucleic acid negative certificate was required to enter stations in Guangzhou, Shenzhen, and other areas.

(5) Strictly implement closed-loop management of international travelers, make pandemic emergency measures in place, transport more than 26,000 inbound passengers, transfer 2,071 passengers with fever to medical institutions, track and manage 1,914 close contacts. The company persisted in the pandemic monitoring and reporting system and prepared the prevention and control measures against clusters of infection. This year, the company organized 150 emergency drills with more than 16,000 instances of participation.

2. People protection

In terms of passengers' pandemic prevention, GSRC has strengthened directing passengers, installed equipment providing masks by scanning the QR code at the entrances and exits, reminded passengers to keep social distancing, wear masks and cooperate with health code check in stations and on trains, cooperated with local governments to well perform nucleic acid testing for passengers going through medium-and high-risk areas, prevented personnel gathering as much as possible.

In terms of employees' pandemic prevention, the company has strictly implemented measures such as temperature measurement, environmental sterilization, avoiding gathering, and scattered dining, centralizedly managed operators in areas where and periods when the epidemic was serious, ensured the normal operation of transport and production while achieving "zero infection" among railway workers, provided employees, especially those who worked on the forefront, grass-roots positions and windows with 17,325 pieces of protective suits, 41,035 pairs of goggles (face guards), and more than 8.685 million masks, organized employees on the frontline to conduct regular nucleic acid testing, had all employees take the first and second shots of COVID-19 vaccine and 86% of them take the booster shot.

- (II) Transport Security
- 1. Line security

GSRC has highly valued transportation safety while insisting on the principle of consolidating foundation, reaching the standard, remaining pragmatic and comprehensive management. Focusing on ensuring the investment in traffic safety projects, GSRC has implemented major renovation projects such as automatic blocking of track and computer interlocking, traction power supply, video surveillance, overhaul and renovation of passenger trains, locomotives, and EMU. Besides, it has promoted the construction of safe, high-quality, and standard lines and special rectification actions for production safety. Throughout the year, GSRC has put an end to responsible driving accidents of Category C of bullet trains and buses and above, achieving "zero accidents" and "zero deaths" in responsible labor safety.

GSRC has carried out a special regulation on the entry of people on the Guangzhou-Shenzhen line, renovating the fence of 16 kilometers, and installing 166 sets of passive electronic locks. The number of people entering the railway decreased by 46% year on year (YOY), achieving the safety goal of zero casualties.

USINE Line Operations (including Entrusted Lines) in 2021					
Project	Work unit	Workload			
Rail replacement	km	71.17			
Replacement of tangential grinded rail	km	35.50			
Tamping	km	821.95			
Installation and replacement of switches	units	330			
Maintenance of public works section	km	1,664			

GSRC Line Operations (Including Entrusted Lines) in 2021

Project	Work unit	Workload
Repair of flood damage to railroads	pieces	25
New and heightened fences	m	23,026
New and heightened walls	m	533
Newly-installed razor barbed wire	m	36,497

2. Personal safety

GSRC attached great importance to major climate changes that may affect transport operation and the safety of passengers, cargoes, and employees, such as typhoons, freezing hazards, and floods, so it formulated corresponding emergency plans and measures, including reduction and shutdown of trains, railway monitoring and emergency maintenance, flood prevention, and personnel protection.

While implementing pandemic prevention and control measures, GSRC has strictly carried out inbound safety inspections to ensure food safety, fire safety, passenger transport facility safety, and the closed management of stations, creating a safe travel environment for passengers. GSRC has cooperated with the local governments to deploy first-aid device AEDs at passenger stations and provided first-aid knowledge training for staff to improve their first-aid ability. GSRC has further renovated the external environment of the general-speed railways, completed the changing of four level crossings into interchange crossings, and renovated and built three railway culverts and one cross-line pedestrian overpass. The improvement would further maintain the travel safety of residents living along the railways.

2021								
Station	Security scanner (sets)	Detector (pieces)	Forbidden objects confiscated (pieces)					
Guangzhou Railway Station	18	157	282,001					
Guangzhou East Railway Station	16	94	189,418					
Shenzhen Railway Station	14	48	145,556					
Subtotal	48	299	616,975					

Security Screening Equipment and Forbidden Objects Confiscated in Major Stations of GSRC in 2021

Strictly observing provisions of the Law of the People's Republic of China on Work Safety and the Regulation on Railway Safety Management, GSRC established a well-grounded concept of safe development and built a safe work environment to ensure employees' safety in production. GSRC values employees' physical safety and occupational health. Upholding the guideline of prevention first and combining prevention with control, GSRC regularly contacts professional organizations to detect occupational hazard factors in workplaces to ensure the test results of intensity and concentration control of these factors in each workplace are in line with the national occupational health standards, thus providing quality working environment and working conditions for on-site operators and realizing

cleaner production.

Year	In 2019	In 2020	In 2021				
Death toll of negligence (persons)	1	0	0				
Death Ratio due to negligence/Mortality	0.023‰						

Death Toll of Negligence in GSRC in 2019-2021

In 2021, 21 employees were injured at work, down 58.8% YOY, and the working days lost due to work injuries totaled 1,447 days, down 64.2% YOY.

3. Technology security

In 2021, GSRC invested a total of RMB 351 million in 147 fixed asset projects related to driving safety, maintained investment in key projects, and improved the technology to ensure safety and energy efficiency. For example, the Guangzhou power supply section has realized the comprehensive "unmanned" operation under the 24-hour monitoring on the Beijing–Guangzhou Railway substation. The North Guangzhou Train Depot has studied and developed a 5T comprehensive information platform, which effectively strengthens the closed-loop handling of 5T forecast faults. During the reporting period, a total of 1,473 key faults were identified, two faults intercepted, and two traffic safety incidents directly prevented, allowing the safety prevention and control capability to be further improved.

4. Other responsibilities

Policies regarding privacy, complaints, and intellectual property rights related to its services:

(1) Protection of passengers' private information: GSRC has complied with relevant laws and regulations to protect passengers' privacy. In accordance with relevant provisions of the real-name train ticket system, GSRC has strictly taken some measures in information security, protecting passenger personal data, carefully managing the credit records of travelers, and recording and reporting passengers who had dishonest conduct.

(2) Complaint channels: Publish contact numbers in the stations and on the trains, and accept complaints about traffic through 12306 and 95306 (both websites and telephone numbers). In major stations, there are service rooms to answer passengers' questions, provide service and accept complaints. GSRC also handles investor-related inquiries through channels such as SSE e-interaction, hotline, fax, and email. Complaint channels have respective internal handling procedures and records, and there are no comprehensive statistics on the number of complaints and their handling results.

(3) Intellectual property rights: GSRC implements a cultural assets management system to better deal with the registration, management and protection of the cultural assets in the company. The company attaches great importance to the protection of intellectual property rights, the purchase of computers and the installation of official software for IT security. The company has established a science and technology project management system, which regulates the establishment, implementation, evaluation, and application of science and technology. In 2021, GSRC established eight new science and technology management projects.

(III) Passenger and Freight Service

1. Passenger service

In 2021, GSRC transported 40.78 million passengers, with revenue of RMB 6.169 billion. Actively adapting to the changing pandemic situation and passenger flow, GSRC has optimized train operation plans to enhance passengers' travel experience. On April 10, 2021, GSRC resumed the operation of Guangzhou–Shenzhen inter-city non-stop trains. On August 18, 2021, GSRC launched Guangzhou–Shenzhen inter-city "counting tickets" (20 round trips between fixed stations within 90 days) and "periodical tickets" (no more than 60 round trips between fixed stations within 30 days). These have been welcomed by the majority of passengers. By December 31, 2021, GSRC had got 2,182 passenger vehicles and 36 sets of multiple units. Altogether 239 ticket vending machines, 397 automatic ticket gates, 190 reimbursement voucher printing machines, and 140 identification information verification devices had been set up at the stations under the control of GSRC. Passengers realized a transaction volume of more than 912 thousand through WeChat, Alipay, and UnionPay.

During the Spring Festival travel rush in 2021 (January 28–March 8, 2021), GSRC centered on its work concept of "offering a wonderful travel experience to passengers by enabling safe, orderly, and harmonious trips" to perform pandemic containment, traffic safety, passenger services, and emergency preparation in a high-standard and high-quality manner. Thus these efforts contributed to the smooth completion of the transportation mission during the Spring Festival travel rush.

Station	Departing passengers (million) in 2021	Departing passengers during spring festival holiday (million) in 2021
Guangzhou Railway Station	1,280.9	132.2
Guangzhou East Railway Station	1,100,4 122.0	
Shenzhen Railway Station	596.1	60.7
Subtotal (million)	2,977.4	314.9

Departing Passenger Volume in Major Stations of GSRC in 2021

2. Cargo service

In 2021, GSRC enhanced its freight transportation organization and improved the three systems of freight source development, production organization, and market service. A total of 18.84 million tons of goods were freighted last year, with the freight revenue totaling RMB 2.035 billion.

GSRC's freight department has conducted intensive visits to factories, mines, ports, and other key clients, stabilized the supply of bulk materials, and promoted the strategy of key clients, "expressway to railway" transport, multimodal transport, and operations of freight trains. In 2021, GSRC Guangzhou Freight Center dispatched 379 China Railway Express (CRE) trains, 117 trains more from 2020, marking a new record of running one train per day. A CRE train named "Bay Area" pioneers the cross-border rail-sea combined transport. It builds a logistic channel connecting

Europe–Shenzhen–Japan and South Korea, unblocking the economic and trade exchanges. This has improved the efficiency of train operation while reducing the cost. This also gives full play to the role of Shenzhen as a pilot demonstration area and the center hub of Guangdong-Hong Kong-Macao Greater Bay Area (GBA), thus helping GBA enterprises to enhance their competitiveness in the international market.

3. Railway network liquidation and other transport services

GSRC provided road network liquidation and other transportation services including passenger and freight transportation network liquidation, railway operation, locomotive and bus leasing, crew service, and package transportation. GSRC is entrusted to provide railway operation services for some railways, such as Wuhan-Guangzhou Railway, Guangzhou–Zhuhai Intercity High-Speed Railway, Guangzhou-Shenzhen-Hong Kong Express Rail Link, Guangzhou–Zhuhai Railway, Xiamen-Shenzhen Railway, Guangdong Railway, Nanning-Guangzhou Railway, Guiyang-Guangzhou High-speed Railway, the Pearl River Delta Metropolitan Region Intercity Railway System, Maoming-Zhanjiang Railway, Shenzhen-Maoming Railway, Meizhou-Shantou Railway, and Ganzhou-Shenzhen High-speed Railway. In 2021, GSRC's revenue from railway network liquidation and other transportation services reached RMB 10.815 billion.

4. Other services

In 2021, other services GSRC has provided mainly included train maintenance, catering, leasing, inventory management and sales, commodity sales, and other railway transportation-related businesses, with annual revenue up to RMB 1.187 billion.

VI. Environmental Protection & Energy Conservation and Emission Reduction

In 2021, by implementing the concept of green development and giving full play to the advantages of green and low-carbon railway transportation, GSRC combined energy conservation and emission reduction with expenditure and energy consumption reduction to promote sustainable economic and social development.

GSRC acts rigidly complying with laws, regulations, and relevant standards such as the *Environmental Protection Law of the People's Republic of China* and the *Law of the People's Republic of China on Environmental Impact Assessment*, to develop an all-around environmental protection system throughout the working process.

1. Specific measures

Energy conservation and emission reduction—GSRC applied environmental protection technologies and facilities in sewage, waste gas, and noise treatment; purchased coal with low sulfur content, reduced emissions from burning sulfides, and decreased sulfur dioxide emissions by 50.67%; cleaned gas-fired boilers regularly, improved the thermal efficiency of the boilers, and reduced the energy consumption of the equipment; organized energy conservation competitions for locomotive drivers and rewarded those who ranked high; optimized the lighting scope and strengthened the use of natural light in the waiting rooms and platforms in passenger stations, installed energy-saving lighting

equipment, turned off advertising light boxes and lighting in non-essential sites in time after operations to effectively reduce power consumption.

Environmental protection—GSRC protected the green landscape and vegetation along railways, organized afforestation and tree planting activities, and promoted garbage classification, to reduce environmental pressures; applied the new online office system and the new information system of enterprise management and legal affairs, improved paperless office capacity, used shared printers, and encouraged printing on both sides of the paper to reduce paper consumption; applied locomotive whistle limit device to reduce noise pollution along railways.

Waste treatment—GSRC reused and repaired the waste parts and equipment, and disposed of the waste rails and sleepers via auction; removed 8,605 tons of garbage along railways through self-compressing, self-transporting, and cooperation with the sanitation authorities; transferred and dealt with 1,061 tons of hazardous waste through professional third-party organizations.

2. Resource usage and discharge

GSRC determined the consumption of relevant resources and emission targets according to the annual operating budget and passenger and freight targets, and strictly implemented emission monitoring and data collection during operation and production to ensure the achievement of emission standards.

	Consumption		Consumptio)n		esource densi	•
Item	In 2021	In 2020	2021 on the basis of 2020	Unit	ion/converted In 2021	In 2020		
Comprehensive energy consumption (tce)	147,155.25	149,058.13	-1.28%	ton/million ton-km	6.19	5.79		
Industrial water consumption (t)	1,234.69	1,487.77	-17.01%	kg/million ton-km	0.05	0.06		
Power consumption (10,000 kWh)	52,097.51	51,958.67	0.27%	10,000 kWh/ million ton-km	2.19	2.02		
Fuel consumption (t)	56,016.98	57,360.29	-2.34%	ton/million ton-km	2.36	2.23		
Gas consumption (10,000 m ³)	74.62	78.81	-5.32%	m ³ / million ton-km	31.39	30.64		
		Em	issions in GSRC					

Statistical Table of Resource Consumption in GSRC

Item	Emission	Emission density (emission/converted			
Ittill		turnover)			

	In 2021	In 2020	2021 on the basis	Unit	In 2021	In 2020
			of 2020			
Industrial wastewater (kt)	1,048.22	1,249.44	-16.10%	ton/million ton-km	0.04	0.05
$SO_{2}(t)$	0.259	0.525	-50.67%	kg/million ton-km	0.01	0.02
Chemical oxygen demand (COD) (t)	45.958	33.219	38.35%	kg/million ton-km	1.93	1.29
Smoke (t)	0.176	0.176		kg/million ton-km	0.01	0.01
Oil-related emission (t)	1.793	1.194	50.17%	kg/million ton-km	0.08	0.05

To increase resource use efficiency, GSRC has planned to implement budget management on materials and energy so as to provide the necessary resources and energy for transportation production and to reduce non-productive consumption of resources. GSRC implemented laws, regulations, and standards such as the *Law of the People's Republic of China on Prevention and Control of Water Pollution* and the *Reuse of Urban Recycling Water—Water Quality Standard for Urban Miscellaneous Use* to protect and save water resources through improving water reuse rate. GSRC did not encounter any problems in finding suitable water sources. As GSRC provides passenger and freight service, there is no statistics about the use of packaging materials for end-products, except for the protective and reinforcement materials necessary for the transportation. One subsidiary of GSRC—Guangzhou Maintenance Team was listed as a key target under emission supervision by the environmental protection authorities. Please refer to the "Environmental Information" section of GSRC's annual report 2021 for more information.

By December 31, 2021, the company had been equipped with 175 diesel locomotives and 60 electric locomotives. The energy consumptions of the locomotives are shown below:

	Diesel lo	comotive	Electric locomotive	
Indicator	In 2021	In 2020	In 2021	In 2020
Diesel fuel (t)	49,506.447	48,678.378		
Diesel fuel consumption intensity (kg/10,000 ton kilometer)	34.47	34.98		
Electricity (kWh)			345,598,514	316,233,764
Electricity consumption intensity (kWh/10,000 ton kilometer)			141.15	139.52
Oil and grease consumption (t)	477.53	334.00	28.25	26.77

Energy Consumption of Locomotives in GSRC

VII. Social Welfare and Employee Rights & Benefits

(I) Social Welfare

In 2021, GSRC actively practiced public welfare undertakings by holding activities related to pandemic prevention and control, Anti-drug Publicity Month, Cybersecurity Week, Constitution Publicity Week, and Environment Day, and organized volunteer activities such as serving tourists, cleaning, and public welfare publicity, with 12,000 participants. It visited 5,725 employees in need and subsidized 6,610 employees through public welfare projects in the railway industry, and donated RMB 55,000 to industrial public welfare projects.

It contributed to poverty alleviation by sending employees to support rural revitalization work in the industry and purchased 90,000 kg of rice and 25,000 L of cooking oil from poverty-stricken areas.

(II) Employee Rights & Benefits

GSRC protected the rights and interests of employees as always and standardized labor and employment in accordance with the laws and regulations, such as the *Labor Law of the People's Republic of China*, the *Labor Contract Law of the People's Republic of China*, the *Trade Union Law of the People's Republic of China*, and the *Regulation of Guangdong Province on the Payment of Wages*.

1. Employees

By December 31, 2021, GSRC had altogether 40,616 employees. Details are shown in the following table.

Project	2021	2020	Employee Turnover Rate (-) and Increase Rate (+) from 2020 to 2021 ⁽¹⁾
Total number of employees	40,616	41,286	-1.62%
Male	30,797	31,412	-1.96%
Female	9,819	9,874	-0.56%
By age			
—Below 30	11,146	12,960	-14.00%
—31-40	9,737	8,522	+14.26%
	9,722	10,209	-4.77%
—Above 51	10,011	9,595	+4.34%
By education degree			
—Master's degree and above	161	157	+2.55%
—Bachelor's degree	5,192	4,826	+7.58%
—Junior college degree	16,556	15,686	+5.55%
—Others (secondary technical school, senior high school, vocational-technical school, etc.)	18,707	20,617	-9.26%

Information Table of GSRC Employees

Project	2021	2020	Employee Turnover Rate (-) and Increase Rate (+) from 2020 to 2021 ⁽¹⁾
By region			
-Shenzhen (location of employer)	3,152	3,152	
—Other regions (location of employer)	37,464	38,134	-1.76%
By specialty			
—Passenger and freight transportation personnel	18,283	19,214	-4.85%
Maintenance personnel	5,547	5,491	+1.02%
—Vehicle personnel	3,496	3,497	-0.03%
—Labor personnel	3,431	3,422	+0.26%
—Electric service personnel	2,009	1,841	+9.13%
—Power and water supply personnel	2,319	2,138	+8.47%
-Building construction personnel	1,226	1,246	-1.61%
-Staff of diversified operations and other subsidiaries	107	114	-6.14%
—Technical and administrative staff	4,198	4,323	-2.89%

1. Note: The turnover rate or increase rate is calculated according to the number of employees at the end of the two years. The data may be affected by factors such as the growth of employees' age, natural death, legal retirement, and the need for adjustment of production and operation.

In 2021, 161 employees of the company had their employment contracts terminated or canceled according to the labor law, accounting for 0.40% of the total number of employees. The company has never employed child labor and forced labor.

2. Compensation package

GSRC sped up the construction of a community of a shared future for employees and adhered to the concept that development should rely on employees and be for employees, and development results should be shared with employees. GSRC substantially safeguarded the rights and interests of employees by signing collective or individual labor contracts, establishing a complete HR management system, and guaranteeing their promotions, working hours, equal opportunities, diversification, anti-discrimination, holidays and vacations, and other benefits. The company adopts a salary distribution policy that closely relates labor remuneration to economic benefits, labor efficiency, and personal performance, and closely relates the total remuneration of the staff to the company's operating benefits.

The company increases the income of front-line employees, pays full social insurance fees and housing funds for employees, and implements the income tax policy overhaul and the leave management system. In 2021, the company's wage and welfare expenses amounted to RMB 8,689.46 million.

3. Team building

The company employs graduates in various professional fields according to its needs of business development, and organizes post standardization training, adaptive training, and qualification training. The company provides assistance to in-service employees in continuing education and diploma education, conducts qualification appraisals for professional titles, carries out talent and expert selection projects, implements talent introduction policy of local governments, and organizes a variety of professional training courses to improve the quality of employees.

The company recruited 719 new graduates in 2021, including seven students who have master's degrees or above, 142 undergraduates, and 570 junior college graduates, improving the overall quality of its staff.

As of the reporting date, the company had 104 full-time managers of vocational education, and 1,219,418 instances of participation in various vocational training programs, completing 100% of the annual training plan, with the training expenditure reaching about RMB 41.51 million. The relevant training is carried out in accordance with production safety, vocational skills qualifications, job needs, and career development plans, without statistics on the number of people and class hours by gender.

Category	Number of Instances of Participation	
Training on safety regulations	273,786	
Off-job training for main types of driving work	11,598	
Qualification training	8,752	
Factory leader training	1,624	
Technical competition and post training	451,924	
Continuing education	18,829	
Others	452,905	

2021 Training Table in GSRC

Workforce category	Quantity (persons)	Average number of training hours (h)
Senior executives of the company	7	124
Leaders of railway sections	177	183
Other middle-level managers	1,660	106

Teaching Schedule for GSRC Administrator Training in 2021

National, Provincial, and Ministerial Level Group Awards GSRC Won in 2021

Group	Employer	Honorary titles
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Group	Employer	Honorary titles
Guangshen Railway Company Limited	Home office of the company	Shenzhen's Top 500 Enterprises in 2021
Party Branch of the Guangzhou–Kowloon Section Fleet of GSRC	Guangzhou-Kowloon Passenger Traffic Section	National Advanced Grassroots Party Organization
GSRC Guangzhounan Station Co., Ltd.	GSRC Guangzhounan Station Co., Ltd.	National "May Day" Labour Medal
General Party Branch of the First Fleet of High-speed Trains and Bullet Trains First Party Branch of the Depot Examination Workshop of East Guangzhou	Guangzhou-Kowloon Passenger Traffic Section Guangzhou Train Depot	National Advanced Party Organization of the Railway Industry
Party Branch of the Operation Workshop of Shenzhen Station	Shenzhen Station	
Crew Workshop of East Dongguan	Guangzhou Train Depot	"Locomotive Trophy" of Federation of Railway Labor Unions
Guangzhou-Kowloon Passenger Traffic Section	Guangzhou-Kowloon Passenger Traffic Section	
North Guangzhou Train Depot	North Guangzhou Train Depot	National Railway Civilized Unit
Guangzhou Train Operation Depot	Guangzhou Train Operation Depot	
Guangzhou Passenger Traffic Section	Guangzhou Passenger Traffic Section	
OCS (Overhead Line System) Work Area of High-speed Trains of Shaoguan	Guangzhou Power Supply Section	National Workers Pioneer
Labor Union of the Passenger Traffic Workshop of North Shenzhen	Shenzhen Station	National "Model Worker Family"
Electric Appliance Team of the Depot Examination Workshop of East Dongguan	Guangzhou Train Depot	National Quality Trustworthy Team
Communist Youth League of Guangzhou Passenger Traffic Section	Guangzhou Passenger Traffic Section	National Railway "May 4th" Red
Communist Youth League of Guangzhou Locomotive Depot CCYL Committee of GSRC	Guangzhou Locomotive Depot GSRC Guangzhou	Flag Communist Youth League Committee

Group	Employer	Honorary titles
Guangzhou Housing Construction Apartment Section Co., Ltd.	Housing Construction Apartment Section Co., Ltd.	
CCYL Committee of GSRC Guangzhou Power Supply Section Co., Ltd.	Guangzhou Power Supply Section	
Electric Transformer and Distribution Maintenance Workshop of GSRC Guangzhou Power Supply Section Co., Ltd.	Guangzhou Power Supply Section	National Railway "May 4th" Red Flag Communist Youth League Branch
Raoping Station, Chaoshan Workshop	Shenzhen Station	Advanced Youth League Branch of National Railway Safety Production
Female Staff Committee of the Labor Union of Guangzhou–Kowloon Passenger Traffic Section	Guangzhou-Kowloon Passenger Traffic Section	National Advanced Female Staff Organization of the Railway Industry
5T Operation Workshop Dynamic Monitoring Class One	Guangzhou Train Depot	National Youth Demonstration Post of Safe Production of the Railway Industry
CCYL Branch of the Depot Examination Workshop of East Guangzhou	Guangzhou Train Depot	Advanced Collective in the Meritorious Service Competition of National Railway Transportation
Guangzhou Locomotive Depot	Guangzhou Locomotive Depot	During the Spring Festival Travel Rush
Party Member Education Base of GSRC Guangzhou Power Supply Section Co., Ltd.	Guangzhou Power Supply Section	National Demonstration Base for Party Member Education of the Railway Industry
Guangzhou Passenger Traffic Section	Guangzhou Passenger Traffic Section	National Demonstration Unit for Ethnic Unity and Progress of the Railway Industry
Youth Volunteers Association of Shenzhen Station	Shenzhen Station	National Railway Excellent Volunteer Organization
Third Group of the Team of Guiyang–Guangzhou High-speed Trains of Guangzhou–Kowloon Passenger Traffic Section	Guangzhou-Kowloon Passenger Traffic Section	Quality Trustworthy Team in the Railway Industry
Zhangmutou Station	Guangzhou Train Operation Depot	Customer Satisfaction Unit with National Railway Passenger and Freight Transport Service Windows
Yutian No.1 QC Team of 5T	Guangzhou Train	Guangdong Excellent Quality

Group	Employer	Honorary titles
Application Workshop	Depot	Management Group
Labor Union of 5T Application	North Guangzhou	"Model Worker Family" of
Workshop	Train Depot	Guangdong Province
Vingshunhua Samiaa Taam	Shenzhen Station	Civilization Model and Youth Model
Yingchunhua Service Team	Snenznen Station	of Guangdong Province
Innovation Studio of Chen Guohua	Guangzhou Electricity	Award Granted by Guangdong
Innovation Studio of Chen Guonua	Section	Federation of Trade Unions

National, Provincial, or Ministerial Level Individual Awards of GSRC in 2021

National, 1 Tovincial, of Ministerial Level Individual Awards of GSICe in 2021		
Individual	Employer	Honorary titles
Zhou Shuqiang	Guangzhou Locomotive Depot	National Outstanding Party Member of the Railway Industry Ten Benchmarks
Lin Guixiang	North Guangzhou Train Depot	National "May Day" Female Pacesetter
You Chengxi	Guangzhou Power Supply Section	Youth Award of the 15 th Zhan Tianyou Railway Science and Technology Award
Zhai Chao	Guangzhou-Kowloon Passenger Traffic Section	
Chen Li	North Guangzhou Train Depot	"Locomotive Medal" of Federation
Deng Meijun, Quan Qiuping	Guangzhou Station	of Railway Labor Unions
Lin Zequan, Cai Guangjian	Guangzhou Locomotive Depot	
Xu Jun	Guangzhou Track Maintenance Division	
Liu Guangsui	Guangzhou Power Supply Section	National Railway Excellent Party Worker
Li Guian	Guangzhou South High-Speed Track Maintenance Division	National Outstanding Party Member of the Railway Industry
Liu Ya	GSRC Guangzhounan Station Co., Ltd.	National Advanced Female Staff Member of Railway Industry
Li Qiang	Guangzhou South High-Speed Track Maintenance Division	National Technical Master of Railway Industry

Individual	Employer	Honorary titles
Li Wen	Guangzhou Passenger Traffic Section	
	GSRC Guangzhou	
Zhang Jian	Housing Construction	National Railway Outstanding
	Apartment Section Co., Ltd.	Communist Youth League Cadre
Xie Zezhi, Fu Dong	Guangzhou Locomotive Depot	
Xu Zhidan	Guangzhou-Kowloon Passenger Traffic Section	
Chen Chuangkun	GSRC Guangzhou Housing Construction Apartment Section Co., Ltd.	National Railway Excellent League Member
Liu Wei	Guangzhou Passenger Traffic Section	
Wu Yue	Guangzhou-Kowloon Passenger Traffic Section	National Excellent Volunteer of
Tang Xiangfei, Lei Yanqiong, Wang An, Zhou Kang	Shenzhen Station	Railway Industry
Chen Zhengjun, Li Lei, Li Shupeng, Li Wei, Peng Changnan, Peng Wei, Yang Simin, Zhang Cheng, Zhong Wenhao	North Guangzhou Train Depot	
Chen Chongyang, Hao Qiandong, Hong Junbin, Liu Hao, Liu Ning, Ye Shenghuai, Zheng Tao	Guangzhou Train Depot	National Railway Youth Post Expert
Peng Qiang, Ma Xinyu, Zhou Min, Chen Hao	Shenzhen Station	
Han Mingzhe, Kang Kai	Guangzhou Passenger Traffic Section	
Gu Hong, Zhang Mingxing	GSRC Guangzhou Housing Construction Apartment Section Co., Ltd.	National Youth Technical Master of the Railway Industry
Xu Chunying	Guangzhou Passenger Traffic Section	National Railway Ni Hong Medal (Note)

Individual	Employer	Honorary titles
Ren Chao	Shenzhen Station	National Railway Sports Advanced Individual
Kang Tao	North Guangzhou Train Depot	Outstanding Individual
Ma Xinyu	Shenzhen Station	in the Meritorious Service
Liu Minglei	Guangzhou Locomotive Depot	Competition of National Railway Transportation During the Spring
Fu Hetong	Guangzhou Passenger Traffic Section	Festival Travel Rush
Yang Yu	Guangzhou Train Depot	Outstanding Individual
Liu Wei, Gao Tianyue, Jiao Jian, Yu Miao, An Zhongli	Guangzhou Passenger Traffic Section	Outstanding Individual Outstanding Volunteer
Zheng Guiquan	Guangzhou Locomotive Depot	National Youth Innovation Award of the Railway Industry
Ding Fei	GSRC Guangzhounan Station Co., Ltd.	"May 1st" Labour Medal of
Kuang Yinghong	Guangzhou Train Operation Depot	Guangdong Province
Bi Jiang	Guangzhou-Kowloon Passenger Traffic Section	Advanced Female Worker of Guangdong Province
Wang Pingting	Guangzhou-Kowloon Passenger Traffic Section	Advanced Individual in Epidemic Prevention of Guangdong Province

Note: 1. An honorary title named after Ni Hong, an advanced figure in the railway industry in China

4. Employee care

In 2021, GSRC built 38 apartments for the single and 24 train crew dormitories and transformed 274 apartments for the single, seven train crew dormitories, and one canteen. By promoting the construction of safe and quality standard lines, e-homes for employees, and smart apartments, GSRC improved the working environment and living conditions of its employees. GSRC organized various activities for employees, such as collective birthday parties, youth sodality, sports competitions, chorus joint performances, hiking and outing, group movie-watching, and psychological lectures, to enrich their spare-time life. It also provided epidemic prevention kits for grass-roots and front-line employees to improve their epidemic protection level.

In 2021, GSRC arranged medical examinations for 31,115 employees, including occupational examinations for 16,496, health examinations for 9,139, and gynecological examinations for 5,480

female employees.

VIII. Report Specification

(I) Report Scope

If not otherwise stated, the data and information in this report are obtained from GSRC and its subordinate stations and sections. Unless otherwise specified, this report primarily describes the economic, environmental and social work of the passenger and freight transportation and other operations of GSRC from January 1, 2021, to December 31, 2021, and briefly reviews previous related activities. Unless otherwise stated, the financial data in this report shall be computed in Renminbi (RMB).

(II) Reporting Principles

Reporting principles are the basis for compiling the CSR Report. GSRC has fully followed the principles of importance, quantification, and consistency to determine and introduce the main performance of the ESG matters in 2021.

(III) Data Collection

In order to collect the data and information on fulfilling CSR, GSRC sent relevant questionnaires to all units (departments). Relevant data and information are collected mainly through the company's intranet, realizing the "paperless data collection".

This report tries to provide a comprehensive picture of what the company has done to fulfill its social responsibilities. The company will continue to refine and improve the disclosure content and format of the CSR report in the future, and update the report annually.

(IV) Compilation Foundations

The content of this report was determined on matters of disclosure in accordance with the requirements of the *Guidelines No. 1 of the Shanghai Stock Exchange for the Application of Self-regulatory Rules for Listed Companies* released by the Shanghai Stock Exchange (SSE) and the *Appendix 27 Environmental, Social and Governance Reporting Guide* of the Stock Exchange of Hong Kong Limited (SEHK).

In case of discrepancies in the two versions, the Chinese version shall prevail.

(V) Social Contribution Value Per Share

According to SSE's *Guidelines*, GSRC continued to disclose its social contribution value and calculation caliber per share in this report. In 2021, GSRC created a social contribution value of RMB 1.27 per share (2020: RMB 1.21/share), with a shareholder basic earning of RMB -0.14 per share. The added value per share created for society reached RMB 1.41 (RMB 421.32 million of tax revenue contributed to the state in the whole year + RMB 8,689.46 million of wages and welfare paid to employees + RMB 351.35 million of major traffic safety investment + RMB 553.40 million of passenger and security service input + RMB 0.055 million of charitable donations - RMB 6.72 million of shares

(7,083,537,000 shares).

(VI) Contact

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